

The diagram illustrates a chemical process system. A vertical distillation column (2) is divided into four sections: 1 (top), 2, 20, and 23, with a bottom section 39. Feed stream 1 enters the column at the 20 section. A side stream 3 exits from the top of the column and passes through pump 4. Another side stream 5 exits from the column between sections 2 and 20 and flows into a horizontal heat exchanger 12. A third side stream 7 exits from the column between sections 23 and 39 and flows into a vertical heat exchanger 8. A fourth side stream 9 exits from the bottom of the column and flows into the same vertical heat exchanger 8. The heat exchanger 8 has an internal cross, indicating a shell-and-tube configuration. The output of heat exchanger 8 is stream 10, which passes through pump 11. The output of heat exchanger 12 is stream 6. The bottom product stream 13 exits from the bottom of the column and passes through pump 14. The entire system is labeled with various components and streams as indicated by the numbers.

